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PREDICTING THE INTENTION TO CYBERBULLY AND CYBERBULLYING BEHAVIOUR AMONG THE UNDERGRADUATE STUDENTS AT THE INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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Abstract: *This study analyses the contributing factors to cyberbullying behaviour; 397 Muslim undergraduate students participated in the study and it has yielded some interesting results. Underpinned by the theory of planned behaviour, this study found some support for the theory. Specifically, perceived social pressure (subjective norms) has been identified as the most important predictor, followed by attitudes towards cyberbullying. However, perceived behavioural control was not significantly related to the toxic behaviour. Overall, these results indicate the need to address the anti-social behaviour by related-parties and preventive measures need to be taken in order to promote pro-social behaviours in the online environment.*

Keywords: *Cyberbully, Social Media, Theory of Planned Behavior, Malaysia, University Students*

Introduction

According to a study for Pew Research Center by Duggan and Brenner (2013), 83% of adults aged 18 to 29 years old use the Internet while attending college. Meanwhile, in Malaysia, the same age group make up 59.7% of Internet users nationwide (MCMC, 2015). The sudden growth of Internet penetration among Malaysian youths has given an avenue for the perpetration of cyberbullying, especially among the biggest users of the Internet; the university students (Zalaquett & Chatters, 2014). With over 2,600 cases reported by MyCERT in the last five years, cyberbullying is no longer an insignificant or trivial issue.

Incidentally, the equally high usage of the Internet and social networking sites among the students in International Islamic University Malaysia (IIUM) make them more likely to commit online misbehaviour. IIUMOnline, a Facebook group with over 25,000 members who are mostly students and former students of the university, is an example where any posting in the group is open to crude commentary by its members. Such space enables cyberbullying to occur easily.

Given the sudden surge of cyberbullying cases (Shuib, 2014) and the rapid growth of Internet penetration and usage in Malaysia (MCMC, 2015), there is an urgent need to recognise and understand whether there are factors that might contribute to the intention to perpetrate cyberbullying among university students. Thus, effective measures can be taken by the appropriate bodies and authorities in order to address this problem.

Literature Review

Cyberbullying is described as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376).Similar essence was also given by Tokunaga who described cyberbullying as "any behaviour performed through electronic media by individuals or groups of individuals that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others," (2010, p. 278).

Hinduja and Patchin (2011, pp. 49) explained in their study that cyberbullying is becoming an omnipresent problem at an alarming speed. They stated "cyberbullying is a growing problem because increasing number of young people use computers, cell phones, and other interactive devices as their main form of social interaction."

In Malaysia, the problem of online harassment has become pervasive. News reports and published surveys have indicated an upsurge of cyberbullying. As reported in the Microsoft Global Youth Online Behaviour Survey, Malaysia is among the highest among 24 countries studied on cyber bullying ("Eight out of 10 children", 2012). Moreover, in a report retrieved from Shuib (2014), Malaysia Computer Emergency Response Team (MyCERT, n.d.) has received a total of 1,328 cases of cyber harassment throughout 2012 to 2014, and it does not include unreported cases.

In a study on cybercrime awareness in Malaysia, the results indicated that there is a lack of awareness regarding cybercrimes and its related laws among active Internet users (Mazni, Zeti, & Aini, 2014). Such negative attitude towards cybercrimes may contribute to the prevalence of cyberbullying in this country.

Cyberbullying perpetration among university students

Smith and Yoon (2012) argued that despite many research on cyberbullying, there are limited number of studies done specifically on students in tertiary education level. Most of the literature available discussed cyberbullying among pre-adolescents and adolescents only.

In a study done by Duggan and Brenner (2013) showed that 83% of adults from 18 to 29 years old use the Internet while attending tertiary education institution and 90% of the respondents gathered are members of social networking sites (SNS) (Zalaquett & Chatters, 2014). Such

extensive usage of technology and social outlets among them, such as Facebook and Twitter, provide conducive channels for bullying to take place.

In a research on 1,272 college students, Zacchilli and Valerio (2011) found less than 1% of the respondents experienced cyberbullying. In another study on 110 students, 9% of them are victims. Furthermore, Walker, Sockman, and Koehn (2011) also surveyed a university campus and found 11% of the respondents have experienced cyberbullying. From the investigation of existing literature, Zalaquett and Chatters (2014) stated that the predominance of cyber bullying among college populations ranges from 10% (Smith & Yoon, 2012) to 28.7% (Hinduja & Patchin, 2010).

In Malaysia, several studies have been conducted on cyberbullying. A much recent study was conducted on 393 Malaysian youths (17 to 30) by Balakrishnan (2015). The results indicate that cyber bullying is still prevalent even after schooling years. When tested against the respondents' demographic background, the research shows females outnumbered males as bullies and victims, younger respondents engage in cyber bullying more than older respondents, and lastly, those who spend two to five hours online daily are open to cyberbullying (as both victims and bullies) than those who spend an hour daily. This result indicates that cyberbullying is still taking place but not as rampant as observed among the younger Internet users.

Another study on Malaysian adolescents (age 12 to 18 years old) by Abu Bakar et al. (2013) found victims of cyberbullying to often be inseparable from their communication channels, such as mobile phones or Facebook. Comments, replies, and "likes" are seen as a motivation or stimulus. Furthermore, the study also found that cyberbullying experience often continue with physical harassment and the victims are reluctant to notify the adults due to fear of being scolded or that the adults might not comprehend what cyber bullying is all about.

Social communication and cyberbullying

Unlike traditional bullying where bullies attack their victims in a physical setting, cyber bullies have the capability to use all types of communication technologies to attack their victims deliberately and repetitively (Chait, 2006).

Smith et al. (2006) have identified seven mediums of cyber bullying from their research, among them are text messages (SMS), pictures and video clips, phone calls, emails, chat rooms, instant messages (IM), and also web sites. Similar result echoed in another research done by Chait (2006), in which the researcher also listed emails, text messages and IM, and chat rooms as some of the communication technologies used by cyberbullies. In addition to that, they also included bash board (forum) and social networking sites (SNS). Smith et al. (2008) also found that text messages and phone calls as the most frequent methods used by cyberbullies.
A recent study done by Whittaker and Kowalski (2014) found that text messages is still the most commonly used channel for cyberbullying victimization. But, aside from that, the researchers also listed another new medium in cyberbullying; the social media. According to them, thanks to the ever-increasing popularity of the social media such as Twitter and such, they emerge as the common sites for the perpetration of cyberbullying and victimization.

In a much larger scope, PRC identified several avenues of the oocurences of cyberbullying, including social networking sites (66%), comments section of a website (22%), online gaming

(16%), personal emails (16%), discussion forums (10%), and online dating website or applications (6%) (Duggan, 2014).

In a research on cyberbullying and adolescents, the respondents stated that online technologies are "heaven" for them as they can conduct their delinquent act. The anonymity appeal of these new technologies and the online interaction allow them to become aggressive as they are hard to be identified (Abu Bakar et al., 2013). Diamanduros et al. (2008) have stated that the lack of supervision and anonymity provided by these communication technologies makes it easy to be both a cyber bully and a victim.

These results indicate cyber bullying is the preferred method of bullying due to the Internet's accessibility, speed, and popularity. However, it is agreed that the mediums used by cyber bullies often reflect the current technologies used the time. Thus, they're constantly changing (Whittaker & Kowalski, 2014).

Theoretical framework

The underpinning theory for this study is Ajzen's theory of planned behaviour (TPB), as suggested by Tokunaga (2010) and Heirman and Walrave (2012) as a promising framework for behavioural studies. Extended from the original 1975 the theory of reasoned action (TRA), TPB predicts that a person's intention and behaviour is largely influenced by their attitude, subjective norm, and an additional factor, perceived behavioural control (Ajzen, 1985). It has a better chance at successfully predicting a behaviour than the initial theory. A wide range of research have been done using this theory to predict and explain specific behaviours, including smoking, drinking, substance use, health services, online shopping, and many more.

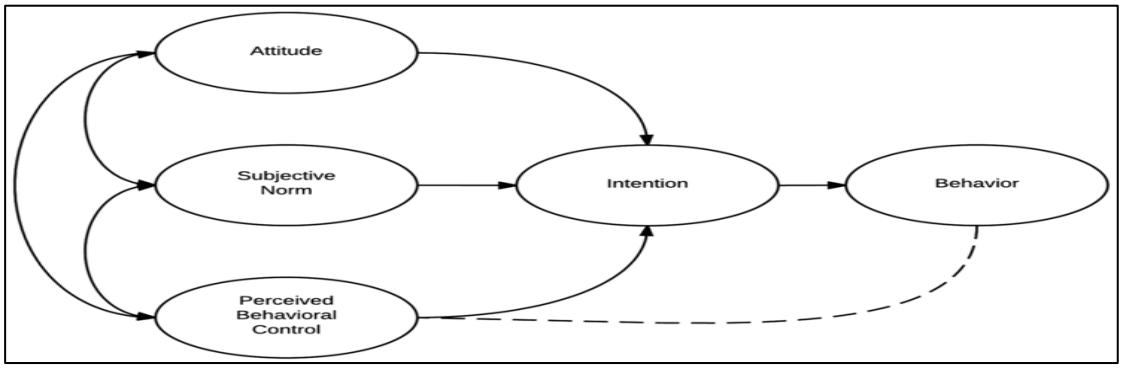

Figure 1 Theory of Planned Behaviour (Beck & Ajzen, 1991)

The key component of TPB is behavioural intention, which can be defined as an influence whether a behaviour should be performed or not (Ajzen, 1991). Beck and Ajzen (1991) stated that intention should be viewed as an immediate antecedent to the actual behaviour in question. Hence, the stronger the intention, the more likely the behaviour will be acted upon. Furthermore, TPB assumes behavioural intention can be predicted by the three conceptually independent determinants, summarised below (Beck & Ajzen, 1991, p. 286);

1. *Attitude:* Refers to the level of "favourable or unfavourable evaluation" towards a certain behaviour.

2. *Subjective norm:* It's a social factor, which refers to the perceived social pressure whether to act or not to act the behaviour in question.
3. *Perceived behavioural control (PBC):* This factor was absent from the original theory. It refers "to the perceived ease or difficulty" of performing the behaviour in study.

In the original TRA, it assumes the intention to perform behaviours can be predicted from attitudes towards the behaviour, as well as subjective norms. However, upon further investigation, it is noted that behaviour can also be predicted if people considered a control factor (Beck & Ajzen, 1991). For that reason, PBC was successfully tested and added to the theory's extension, the theory of planned behaviour (TPB).

Conceptual Framework

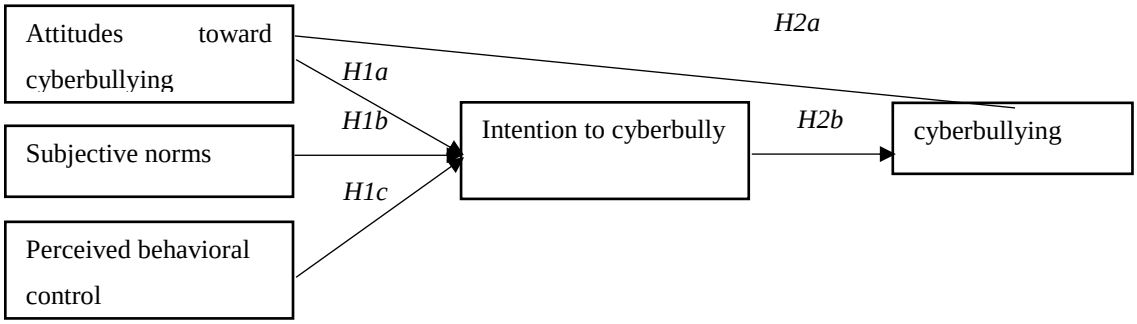

Figure 2 The TPB Applied to the Perpetration of Cyber Bullying Behaviour Among Students in the International Islamic University Malaysia

The research model that was used in this study as shown in Figure 4 is based on TPB. The behaviour in question is cyber bullying. Following the typical TPB model, the intention to cyberbully is included as the construct antecedent to cyberbullying behaviour. The following are the explanations of each variable:

1. Attitudes toward cyber bullying: Refers to the favourable or unfavourable evaluation of the respondents toward cyber bullying
2. Subjective norms: Refers to the perceived social pressure whether to cyber bully or not
3. Perceived behavioural control: Refers to the ease or difficulty of performing cyber bullying
4. Intention to cyber bully: Refers to how much of an effort the respondent is planning to exert on the act of cyber bullying
5. Cyber bullying: Refers to the behaviour in question.

Research objectives

Based on the literature and the theoretical framework above, the objectives that this study aims to achieve are the following;

1. To test the relationship between attitudes toward cyberbullying, subjective norms, perceived behavioural control, and intention to cyberbully.
2. To test the relationship between attitudes toward cyberbullying, subjective norms, perceived behavioural control, intention to cyberbully, and cyberbullying behaviour.

Hypotheses

A study done by Heirman and Walrave (2012) found attitudes toward cyber bullying to have a strong positive relationship towards the intention to cyber bully and the actual cyber bullying behaviour, followed by subjective norms and PBC. Also, the same outcome appeared in a study done on Internet shopping whereby the three variables from TPB demonstrated positive relationship with the behaviour (Joey, 2004). However, in a study by Chang (1998) on illegal copying of software, the researcher found PBC as the strongest behaviour predictor, followed by attitudes. However, subjective norms showed a negative relationship with the said behaviour. These inconsistencies show that there should be more study on the relationship between cyberbullying behaviour and TPB's three indicators. Therefore, the hypotheses are:

H1: There is a positive relationship between: (a) attitude towards cyber bullying, (b) perceived behavioural norms, and (c) behavioural control, with the intention to cyberbully.

H2 (a): There is a positive relationship between: (i) attitude towards cyber bullying, (ii) subjective norms, and (iii) perceived behavioural control, with cyberbullying behaviour.

H2 (b): There is a positive relationship between intention to cyberbully and cyberbullying behaviour.

Methodology

The study adopted a survey research design. The survey questionnaire was constructed based on the guide provided by the founder of theory of planned behaviour, Icek Ajzen (2013). Questionnaires used in other previous studies regarding cyberbullying and theory of planned behaviour were also referred to. The questionnaire was divided into six sections that covered the respondents' 1) demographic background, 2) attitudes on cyberbullying, 3) subjective norms or social pressure to perform cyberbullying 4)perceived behavioural control or perceived easiness or difficulty to perform cyberbullying 5) intention to cyberbully, 6) cyberbullying behaviour.

The population of interest is the undergraduate students as they represent the youth who are the majority of internet users and are highly exposed to cyberbullying. Since the population of interest has been clearly defined, purposive sampling was done to expedite the research process. More specifically, students enrolled in International Islamic University Malaysia (IIUM) for Semester II, 2015/2016 were sampled. They were divided into 15 clusters based on the existing and recognised faculties, or known as "kulliyyah" by the campus community. Kulliyyah of Islamic Revealed Knowledge and Human Sciences (KIRKHS) was selected due to its status as the biggest faculty in the university with over 4,900 undergraduate students. Every semester, KIRKHS offers a variety of introductory courses, which are compulsory for all students in the faculty, regardless of their level of study (Level 1 to 4) and major (Human Sciences or Islamic Revealed Knowledge). A total of 51 sections are offered for all introductory courses, with a maximum number of 60 registered students for each individual section.

Based on the class list obtained from the student portal, two sections from each course were selected, whereby one section was chosen randomly from Monday and Wednesday's list of sections, and another section was also chosen randomly from the list of sections for Tuesday and Thursday. Based on this cluster sampling technique, 397 undergraduate students took part in the data collection over the course of four days.

Results Analysis

Demographics of the respondents

The respondents' demographics include gender, age, nationality, and level of study. The results indicated that female students represent the majority of the current study 76.1% (*N*=302) and male students represent 23.9% (*N*=95). The age range of the respondents participated in this study are between 17 years old to 26 years old (*M*=21.59). Approximately 32% of the respondents are made up of 21 year olds (*N*=127), followed by 22 year olds 27.5% (*N*=109), 20 year olds 15.9% (*N*=63), and 23 year olds 13.6% (*N*=54). The rest of the respondents are 17 year olds 0.3% (*N*=1), 18 year olds 0.5% (*N*=2), 19 year olds 2.3% (*N*=9), 24 year olds 5.8% (*N*=23), 25 year olds 1.5% (*N*=6), and the oldest respondents are 26 year old 0.8% (*N*=4). In terms of nationality, 85.4% are Malaysians (*N*=339), and 14.6% are non-Malaysians (*N*=58). And lastly, as for the respondents' level of study, a majority of the respondents are first year students 39.8% (*N*=158), followed by second year 34% (*N*=135), third year 21.2% (*N*=84), and fourth year 5% (*N*=20). Specific details regarding the demographic characteristics of the respondents are displayed in Table 3.

Table 1: Demographic characteristics of respondents

	N	Percentage	Mean	SD
Gender				
Male	95	23.9		
Female	302	76.1		
Total	397	100		
Age				
17	1	0.3		
18	2	0.5		
19	9	2.3		
20	63	15.9		
21	127	32.0	21.59	1.328
22	109	27.5		
23	54	13.6		
24	23	5.8		
25	6	1.5		
26	4	0.8		
Total	397	100		
Nationality				
Malaysians	339	85.4		
Non-Malaysians	58	14.6		
Total	397	100		
Level of Study				
First year	158	39.8		
Second year	135	34.0		
Third year	84	21.2		
Fourth year	20	5.0		
Total	397	100		

Relationship between attitudes toward cyberbullying, subjective norms, perceived behavioural control (PBC), and the intention to cyberbully

The study questioned the relationship between the three determinants formed from Ajzen's TPB; attitudes toward cyberbullying, subjective norms, perceived behavioural control (PBC), and the intention to cyberbully. The hypotheses were:

H1 (a): There is a positive relationship between attitudes toward cyberbullying and the intention to cyber bully.

H1 (b): There is a positive relationship between subjective norms and the intention to cyberbully.

H1 (c): There is a positive relationship between perceived behavioural control and the intention to cyberbully.

The analysis suggested there is a moderate positive relationship between attitudes toward cyberbullying and the intention to cyber bully (r = .499, p < .01). It means a person's attitude or personal evaluation of cyberbullying behaviour positively influenced their intention to act on it. In conclusion, H1 (a) is accepted. Result is shown in the following Table 2.

Table 2: Pearson's Bivariate Correlation for Attitudes toward Cyberbullying and the Intention to Cyberbully

Variable	Mean	SD	Attitudes	Intention
Attitudes	2.280	.573	1.00	.499
Intention	1.931	.654	.499	1.00

As for subjective norms, the Pearson's bivariate correlation analysis also suggested that there is a moderate, positive relationship between the respondents' subjective norms and the intention to cyberbully (r = .579, p < .01). This result showed that subjective norms, or perceived social pressure, is the strongest influence to a person's intention to perpetrate bullying via cyber space. Therefore, H1 (b) is accepted. Result is shown in the following Table 3.

Table 3: Pearson's Bivariate Correlation for Subjective Norms (SN) and the Intention to Cyberbully

Variable	Mean	SD	SN	Intention
SN	2.007	.599	1.00	.579
Intention	1.931	.654	.579	1.00

The last variable to be tested against the intention to cyberbully is perceived behavioural control (PBC). The Pearson's bivariate correlation analysis implied that there is no significant relationship established between PBC and the intention to cyberbully (r = .019, p = .91). In other words, there is no significant relationship between the ease or difficulty of performing cyberbullying with the respondents' intention to cyberbully. Thus, H2 (c) is rejected. The result is shown in the following Table 4.

Table 4: Pearson's Bivariate Correlation for Perceived Behavioural Control (PBC) and the Intention to Cyberbully

Variable	Mean	SD	PBC	Intention
PBC	3.356	.596	1.00	.019
Intention	1.931	.654	.019	1.00

In addition to the results above, the researcher also analysed the relationship between attitudes toward cyberbullying, subjective norms, and PBC. The result suggested that there is a moderate, positive correlation between the respondents' attitudes toward cyberbullying and subjective norms (r = .637, p < .01). However, the result between PBC and attitudes toward cyberbullying indicated a weak negative relationship (r = -.036, p < .01), as well a moderate negative relationship PBC and subjective norms (r = -.043, p < .01). See Table 5 for details.

Table 5: Pearson's Bivariate Correlation for Attitudes toward Cyberbullying, Subjective Norms (SN), and Perceived Behavioural Control (PBC)

Variable	Mean	SD	Attitude	SN	PBC
Attitude	2.280	.573	1.00	.637	-.036
SN	2.007	.599	.637	1.00	-.043
PBC	3.356	.596	-.036	-.043	1.00

Relationship between attitudes toward cyberbullying, subjective norms, perceived behavioural control (PBC), intention to cyberbully, and cyberbullying behaviour

The study examined the relationship between attitudes toward cyberbullying, subjective norms, PBC, the intention to cyberbullying, and cyberbullying behaviour. The hypotheses were:

H2 (a) (i): There is a positive relationship between attitude towards cyberbullying and cyberbullying behaviour.

H2 (a) (ii): There is a positive relationship between subjective norms and cyberbullying behaviour.

H2 (a) (iii): There is a positive relationship between perceived behavioural control and cyberbullying behaviour.

H2 (b): There is a positive relationship between intention to cyberbully and cyberbullying behaviour.

A hierarchical multiple regression analysis were conducted to examine the ability of each variable to predict cyber bullying behaviour. Attitudes toward cyber bullying, subjective norms, and PBC were entered in the first step of the analysis, and intention to cyber bully was later entered in the second step. Cyber bullying behaviour served as the dependent variable.

The first step of the hierarchical multiple regression analysis suggested that attitudes toward cyberbullying, subjective norms, and PBC accounted for 21% of predicting cyberbullying behaviour [R^2 = .212, F (3, 393) = 35.33, p < .001]. Attitudes toward cyberbullying (p = .012 < .05) and subjective norms (p = .000 < .05) have been suggested as reliable predictors of cyberbullying behaviour than PBC (p = .064 > .05).

The intention to cyberbully entered in step 2 accounted for an additional 9% for predicting cyberbullying behaviour [R^2 = .298, F (4, 392) = 41.661, p < .001]. The addition of intention to cyberbully resulted in a significance increase in F. Therefore, it can be said the additional variable was a positive predictor of cyber bullying behaviour (β = .37, p < .05). However, attitudes toward cyberbullying ceased to be a significant predictor in step 2 (p > .05) but subjective norms remained as a significant predictor (p < .05).

After all the variables were entered into the hierarchical multiple regression analysis, the results suggested that subjective norms, or perceived social pressure, and the intention to cyberbully were able to predict the perpetration of cyberbullying among respondents. Therefore, H2 (a) (ii) and H2 (b) are accepted, and H2 (a) (i) and (iii) were subsequently rejected. Final results of the hierarchical multiple regression analysis are shown in the following table 6.

Table 6: Summary of Hierarchical Multiple Regression Analysis in Predicting Cyberbullying Behaviour

Predictor	*B*	*SE B*	*β*	*T*	*P*
Step 1					
Attitude	.154	.061	.146	2.518	.012
SN	.354	.059	.350	6.025	.000
PBC	.085	.046	.083	1.858	.064
$F(3,393)=35.330$; $p=.000$; $R=.461$; $R^2 = .212$; $R^2\ Adj.=.206$					
Step 2					
Attitude	.069	.059	.065	1.164	.245
SN	.190	.060	.188	3.144	.002
PBC	.067	.043	.066	1.561	.119
Intention	.341	.049	.368	6.927	.000
$F(4,392)$-41.661; $p=.000$; $R=.546$, $R^2=.298$; $R^2\ Adj.=.291$					

Notes. SN refers to Subjective Norms, PBC refers to Perceived Behavioural Control, $p < .05$, β means standardized coefficient, $N = 397$

Results of hypothesis testing

Overall, the theory of planned behaviour was found to be a good theoretical framework for cyberbullying behaviour.

Table 7: Results of Hypothesis Testing

Hypothesis		Result	Comment
H1 (a)	There is a positive relationship between attitudes toward cyberbullying and the intention to cyberbully.	Accepted	Significant positive relationship established.
H1 (b)	There is a positive relationship between subjective norms and the intention to cyberbully.	Accepted	Significant positive relationship established.
H1 (c)	There is a positive relationship between perceived behavioural control and the intention to cyberbully.	Rejected	No significant relationship established.
H2 (a) (i)	There is a positive relationship between attitude towards cyberbullying and cyberbullying behaviour.	Rejected	No significant relationship established.
H2 (a) (ii)	There is a positive relationship between subjective norms and cyberbullying behaviour.	Accepted	Significant positive relationship established.
H2 (a) (iii)	There is a positive relationship between perceived behavioural control and cyberbullying behaviour.	Rejected	No significant relationship established.

H2 (b)	There is a positive relationship between intention to cyberbully and cyberbullying behaviour.	Accepted	Significant positive relationship established.

Discussions

This study found that the respondents' attitudes toward cyberbullying is the second most important indicator in predicting their likeliness to perpetrate the misbehaviour. As discussed in the literature review, attitude has been defined by Fishbein and Ajzen (1975) as a person's feeling, may it be negative or positive, towards an object. Such attitude, later explained by Ajzen (1991), may predict a person's actual behaviour.

With Malaysia being among the countries with pervasive cyberbullying problem ("Eight out of 10 children", 2012) and a variety of harassments constantly displayed on social networking sites, it is easy to see why positive attitude towards cyber bullying is common among the respondents. In a study by Hinduja and Patchin (2008), the researchers stated that cyberbullies have the tendency to victimise those who perceive cyberbullying negatively and they underestimate the impacts of their action. The same research also found that bullies perpetrate the toxic behaviour for few common reasons, including 'revenge', 'he/she deserves it', and 'for fun', thus forming a positive attitude towards cyberbullying.

Heirman and Walrave (2012) suggested prevention and intervention programmes that primarily focus on converting positive attitude towards cyberbullying among youths into negative attitude. Mason (2008) also stated that such programmes are important in promoting the need to understand the impact caused by cyberbullying behaviour towards the victims.

This study also identified perceived behavioural control, or PBC, as the weakest predictor for the engagement in cyberbullying among the population. Even though the variable were less important than the previous two, it would be a mistake to ignore it. In TPB, Beck and Ajzen (1991) described the predictor as "perceived ease or difficulty" in performing a certain behaviour. In a research on recycling behaviour, Davies et al. (2002) found PBC helps to facilitate the motivation to perform the behaviour. Therefore, the findings from this study suggest that it is possible, no matter how weak it may seem, for the respondents to perpetrate cyberbullying because they perceived it is as easy due to technological control.

Extensive usage of the Internet and the ever-increasing popularity of social networking sites or social media in recent years have made them a common ground for the perpetration of cyberbullying (Gilroy, 2013; Whittaker & Kowalski, 2014). By being in the Internet longer than the others, cyberbullies learn a lot about the features that exist within the chosen networking application. Previous studies have revealed that cyberbullies, as well as victims, are generally heavy Internet users (Kowalski et al., 2008), and spend more hours online than their peers (Balakrishnan, 2015; Kowalski & Witte, 2006).

To summarise, most of the findings correspond with empirical evidence from the literature discussed throughout this paper. Ajzen's TPB has provided an interesting insight into cyberbullying behaviour among the undergraduate students in a tertiary-education institution and it successfully helped this paper to pinpoint the relationship between the toxic behaviour and TPB-antecedents. The findings indicated that subjective norms as the most important

predictor for the intention to participate in cyberbullying behaviour, followed by attitudes toward cyber bullying, and PBC.

Limitations of the Study.

Since the respondents are only Muslim undergraduate students in International Islamic University Malaysia (IIUM), it is highly unlikely to generalise them as the entire population of Internet users. Moreover, the researcher also recognised that the sampling method used may be exposed to social desirability bias whereby the respondents have the tendency to withhold undesirable responses in order to fulfil socially desirable responses.

Secondly, the use of quantitative analysis enabled has the researcher to gather statistical data on cyberbullying activities among the respondents. However, one limitation for this type of study is the researcher's inability to understand the results produced by the data in a rich manner. For comprehensive and sound findings, suggestions for future research are discussed in the next subchapter.

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